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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/011,160	01/20/1998	HAROLD HALL		9528

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EXAMINER

CECIL, TERRY K

ART UNIT PAPER NUMBER

1723

DATE MAILED: 05/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/011,160

Applicant(s)

HALL, HAROLD

Examiner

Mr. Terry K. Cecil

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-45 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 32 is/are allowed.
6) ☒ Claim(s) 12-18, 22-31 and 33-45 is/are rejected.
7) ☒ Claim(s) 19-21 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Because of applicant's amendment to claim 26, the claim objection of the prior office action have been withdrawn.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

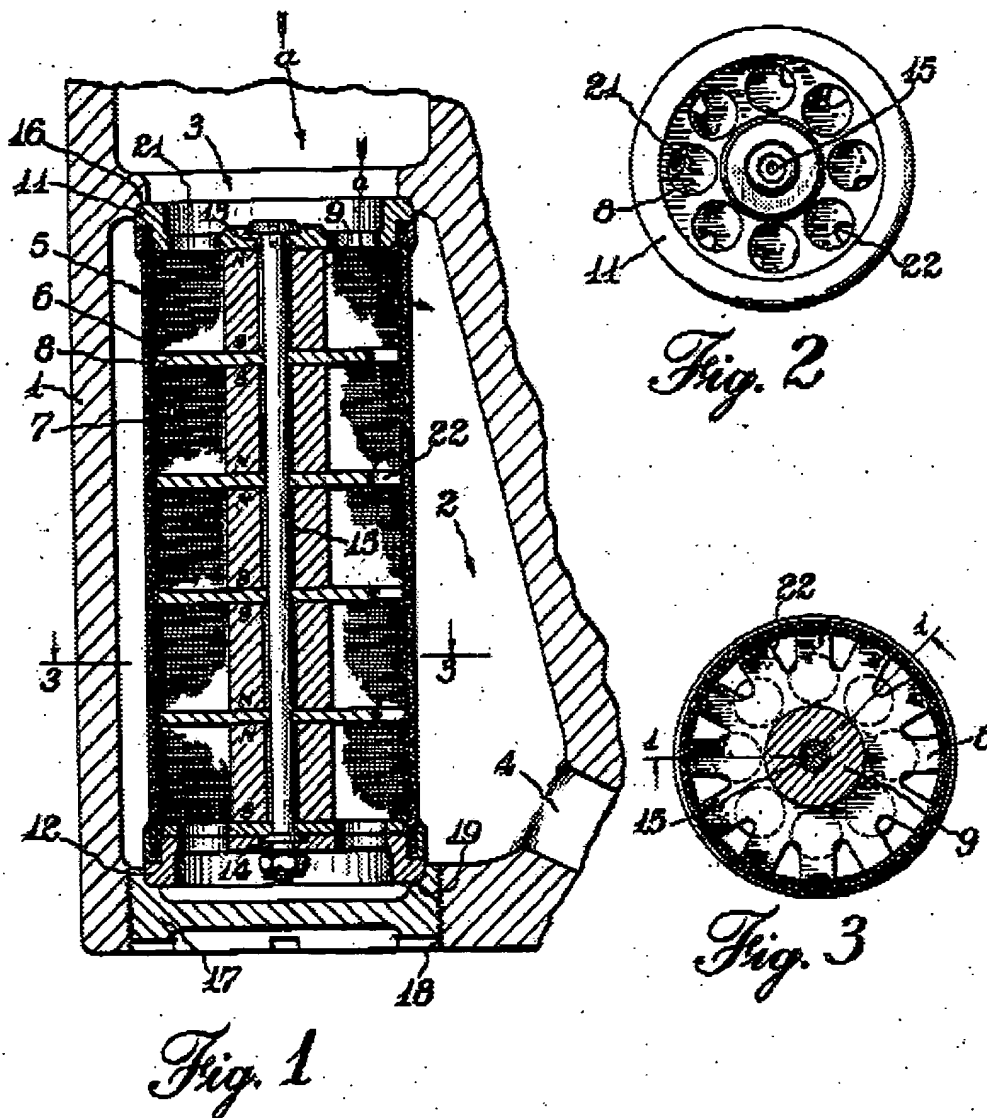
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 12-13, 15, 20, 22-24, 27-31 and 33-45 are rejected under 35 U.S.C. 102(b) as being anticipated by Frei (U.S. 2,149, 764).

Art Unit: 1723



As shown above, Frei discloses the all limitations of the aforementioned claims including the metal plates and magnets having faces of opposite polarity; the plates include aligned recesses for fluid flow. The arrangement allows for capturing of magnetic particles flowing in the fluid

2**2,14**

through the filter unit 5, the fluid is forced to flow by the multitude of edges and corners provided by the magnetized baffle plates, and the magnetic material in the fluid adheres to such edges and also to the wires of the screens 8 and 7 which are also magnetized by their engagement with the peripheries of the baffle plates.

Art Unit: 1723

[as in claims 12, 22-23, 27, 30, 31 and 40]. Because of the arrangement, the plates are alternately charged such that regions are formed that would repel some particles, depending upon their charge [as in claims 13 and 28]. Distribution plates (11, 12) are also taught having apertures aligned with the plate recesses [as in claim 15]. As shown in figure 5, additional recesses (“slots”) are taught. Also in figure 3, the notches 22 can be considered as a series of alternating recesses and slots [as in claim 20]. As for claim 24, plate 11 is thicker than plate 8 [as in claim 24]. Filter screen 5 is positioned downstream of the plates and magnets [as in claim 29]. As for claims 33-34, notches 22 formed pole pieces therebetween that extend radially past the magnet surfaces. As for claim 35, every other notch 22 can be considered a “radial slot” formed in a pole piece. The centrally located plates are of a common configuration [as in claim 37-38]. As for claims 39 and 40, the device can be unassembled because of bolt 15.

Because the plates are oppositely charged the opposed protrusions defining the notches in respective plates are considered to be “pole pieces” and a magnetic flux is formed therebetween the oppositely charged pole pieces [as in claims 42-45] such that regions are defined that attract and retain ferromagnetic material [as in claims 12, 27, 30, and 33]. The particles adhere to the edges of the baffle plates (it is noted that particles adhering to e.g. the bottom edge of a notch evidences that a collecting region exists between the pole pieces).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Frei in view of Lofthouse et al. (U.S. 4,208,277). Claim 18 has the limitation of the distribution plate being made of non-ferromagnetic material. Lofthouse teaches distribution plate 70 made of polyurethane [as in claim 18]. It is considered that it would have been obvious to one ordinarily skilled in the art at the time of the invention to have the distribution plate 11 of Frei to be made of polyurethane, as in Lofthouse, since Lofthouse teaches the benefit of a plate that can also function as a gasket (a seal). Notice that the plate 11 of Frei also acts as a seal against the flanges of a housing.

5. Claims 14, 16-17, 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frei in view of Morrick (U.S. 5,389,252). Frei teaches a housing and inlet and outlet connections but does not teach a flow passage through a tube within the aperture of a magnet of the aforementioned claims. However, Morrick teaches such a flow configuration having a tube

Art Unit: 1723

20 and apertured magnet 24. It is considered that it would have been obvious to one ordinarily skilled in the art at the time of the invention for the invention of Frei to include the flow configuration of Morrick since Morrick teaches the benefit of compatibility with commercially available oil filters. Such a configuration replacing the function of the screen 5 of Frei would allow for longer filtration times between cleaning of the magnets since the filter portion would be disposable. The tube of Morrick also includes threads for maintaining the abutment of components [as in claim 17].

Response to Arguments

6. Applicant's arguments filed 1-28-2005 have been fully considered but they are not persuasive: the teaching in Frei that the particles adhere to the edges of plates (e.g. a bottom edge of a notch that is considered to be between the "pole pieces") evidences that collection regions are formed between the plates. Applicant's argument that the presence of the screen prevents the formation of collection areas between the plates is not convincing—the examiner contends that the magnetic flux field extends from one plate, through the screen, and to the other plate of opposite polarity and would include at least a portion of the area between "pole pieces" of the respective plates, as evidenced by the particle collection above.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

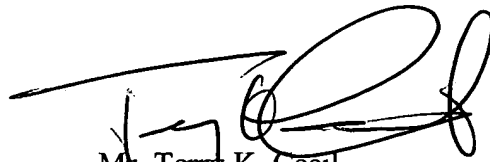
Art Unit: 1723

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 1723

8. Contact Information:

- Examiner Mr. Terry K. Cecil can be reached at (571) 272-1138 at the Carlisle campus in Alexandria, Virginia for any inquiries concerning this communication or earlier communications from the examiner. Note that the examiner is on the increased flextime schedule but can normally be found in the office during the hours of 8:30a to 4:30p, on at least four days during the week M-F.
- Wanda Walker, the examiner's supervisor, can be reached at (571) 272-1151 if attempts to reach the examiner are unsuccessful.
- The Fax number for this art unit for official faxes is 703-872-9306.
- Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Mr. Terry K. Cecil
Primary Examiner
Art Unit 1723

TKC
May 18, 2005